

**ABSTRACT**

Calcineurin (CN)-binding regions in the N-terminal domain derived from NF-ATx is disclosed. Also disclosed are CN-binding polypeptide compositions, DNA segments encoding these polypeptides, and methods of use. The CN-binding polypeptides bind to CN, suppressing the interaction between NF-AT and CN. The CN-binding polypeptide compositions can be used for treating pharmacological intervention with  $Ca^{2+}$ -dependent signaling events. The CN-binding polypeptide or DNA segments encoding them can be used to assay and screen candidates of pharmaceuticals, in particular, in the evaluation and characterization of immunosuppressants specifically interfering with the interaction between NF-AT and CN.

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